



A COMPARATIVE STUDY OF LEARNING & THINKING STYLE IN RELATION TO ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS

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ABSTRACT

This study compares learning & thinking style in relation to academic achievement of senior secondary school students in Buland Shahr. Relevant literatures that were related to the study were reviewed. In order to be able to measure the variables for the study, three hypotheses were developed. t test was used to analyze the response to the instrument. The findings from the study indicated that girls give more emphasis to right hemispheric dimension and boys give more emphasis to whole and left hemispheric dimension. High academic achievers and low academic achievers have same preference for right, left and whole hemispheric dimension of learning and thinking style and secondary school boys and girls have same academic achievement.

KEY WORDS: Learning & Thinking style, Hemispheric Dimensions, Academic Achievement.

INTRODUCTION:

Many educators are still perplexed about the styles of students in learning and thinking process; what effect these styles have on children's performance in schools and why attention should be given to children's performance to assess their levels of ability. Styles depend upon cerebral dominance of an individual in retaining and processing different modes of information in his/her own style of learning and thinking. Styles are propensities rather than abilities. They are the ways of directing the intellect which an individual finds comfortable. The styles of learning and thinking are as important as levels of ability and we ignore to identify and develop them in students at an early and appropriate stage. Torrance and others have developed the SOLAT tool based on the hemisphericity functions of the brain. It identifies hemisphericity dominance by way of studying the hemisphere functions. It indicates a student's learning strategy and brain hemisphere preference in problem-solving.

LEARNING STYLE:

Learning style is that which promote knowledge acquisition through reflection on personal explore, discover and construct knowledge that is relevant, applicable and useful to them instead of passively receiving information from teachers. Students can actively contribute towards constructing their own knowledge for real world activities.

THINKING STYLE:

Thinking style can be called the thinking process of an individual. This term refers what the little children think about concepts-verbally (things which they can represent in their native language) or visually (which they think in pictures and images) and translate in to verbal concepts before they can talk about something.

ACADEMIC ACHIEVEMENT:

Academic achievement has become an index of adolescent's future in the competitive world. Now a days adolescents are becoming more career minded. In order to develop and identify in the society, they are becoming more and more concerned about their academic achievement. Adolescents academic achievement differ from each other due to the various factors like gender, parents education, occupation, type of family, socio-economic status, parental relationship and self-concept affects the student's academic achievement.

NEED OF THE STUDY:

It is foremost important for the teachers to focus their attention on student's favourite thinking styles before imparting the subject matter. If they fail to do so, the consequences may be serious because the teachers may tend to confuse styles of students mind. Since the method of teaching adopted by teachers often reflects their personal thinking style, the students who have the same thinking style of the teachers are only benefited and rewarded. Since any subject can be taught in any way that is compatible with any style, students will seek learning activities that are compatible with their own preferred styles, both teachers and students tend to exploit their preferred styles. This may or may not match. Therefore, it is important for the teachers to know the students preferred styles, so that the teachers can capitalize the opportunities for students learning. Styles like abilities are not formed by birth. They are partly developed due to environmental condition and by way of nurturing children by their parents and teachers.

REVIEW OF RELATED LITERATURE:

Cody (1983) compared the style of averages, gifted and highly gifted students in grades 5 through 12. The investigator found that average intelligent student showed more integrated and left hemispheric style and gifted students had higher level of integrated style of right hemispheric style of thinking. Further highly gifted students indicated more integrated and right hemispheric style.

Raina & Vats (1983) observed that females had higher scores in right hemisphere styles of thinking in comparison to males but the difference in mean scores was not statistically significant.

Burger (1985) indicate that the correlation between CAI preference and academic achievement but not between learning style and academic achievement. Students who had higher grades appeared to be more favourable to CAI but learning style showed no clear relationship either with CAI preference or academic achievement.

Garcia, Hughes (2000) indicated that students' academic achievement was related to students' thinking styles. Students that prefer to work individually (Internal), that do not enjoy creating, formulating, and planning for problem solution (Legislative in a negative sense) and those that have adherence to existing rules and procedures (Executive) were those which obtained higher academic achievement.

Mohan Sundaram and Kumar (2000) found that there was no significant association between management of schools and styles of learning and thinking. Students of government schools & private school did not differ significantly in either of their styles of learning & thinking right hemisphere, left hemisphere in learning.

Demirbas, Demirkan (2007) found that the performance scores of converging and diverging students differed significantly in favor of converging students only in design courses. In design education, instructors should provide a strategy that is relevant to the style of each learner in design studio process.

Anjum (2013) Research finding revealed that majority of the students have right hemispheric dominant style of learning and thinking. Significant difference was found in right hemispheric and whole hemispheric dominant learning & thinking style of urban and rural students. Insignificant difference was found in left hemispheric learning thinking style of urban and rural students. Boys and Girls differ significantly in right, left and whole hemispheric dominant style of learning & thinking.

Vengopal, Mridula (2007) examined the hemispheric preferences for information processing and styles of learning and thinking in children. Results revealed that there was significant difference in the right and left (brain) hemisphere preference for information processing among children and that boys were more right hemispheric oriented and girls were more left hemispheric oriented in information processing

Sharma, Neetu (2011) found that learning-thinking style and academic achievement of secondary school students are positively and significantly related to each other. Students having high academic achievement are better for teaching. It can be said that academic achievement is a factor which influence the learning-

thinking style of secondary school students. It can also be concluded that male and female secondary school students are not different in respect to their academic achievement whereas they are different in respect to their learning-thinking style.

OBJECTIVES:

1. To compare learning and thinking style of secondary school boys and girls.
2. To compare learning and thinking style of high & low achiever.
3. To compare academic achievement of secondary school boys and girls.

HYPOTHESES:

1. There is no significant difference between learning and thinking style of secondary school boys and girls.
2. There is no significant difference between learning and thinking style of high & low achiever.
3. There is no significant difference between academic achievement of secondary school boys and girls.

RESEARCH DESIGN:

For the present study normative survey method was applied to comparison

between learning & thinking style and academic achievement of secondary school students.

POPULATION AND SAMPLE OF THE STUDY:

Student studying in XI grade and belong to the district Buland Shahr. The sample of 200 students was selected randomly from senior secondary schools of Buland Shahr district.

VARIABLE:

A variable is any feature or an aspect of an event, function or process that by its presence and nature effects some other events or process which is being studied. In the present study following variables are used:-

1. Learning & Thinking Style
2. Academic achievement

STATISTICAL TECHNIQUE USED IN STUDY:

The statistical technique t test was applied in the study.

TOOL TO BE USED IN STUDY:

To assess the learning & thinking styles of students, style of learning and thinking tool used in study constructed by D. Venkataraman.

DATA ANALYSIS AND INTERPRETATION:

Table 1: Showing t test value for hemispheric dimensions of learning & thinking style for Boys and Girls.

S. No.	Hemispheric Dimension	Gender	Sample Size	Mean	S. D.	d.f.	t. value	Level of significance
1	Right	Boys	100	12.89	3.95	198	18.43	Significance**
		Girls	100	21.44	2.62			
2	Left	Boys	100	26.62	6.19	198	2.33	Not Significance**
		Girls	100	24.32	3.82			
3	Whole	Boys	91	10.97	4.07	198	9.73	Significance**
		Girls	71	5.90	2.92			

*Value of .05 = 1.98, **Value of .01 = 2.62

The table 1 shows right, left, and whole hemispheric dimensions for learning & thinking style for boys and girls. t test value for right hemisphere between boys and girls are found 18.43 which is significant at 0.01 level of significance, t test value for left hemisphere between boys and girls are found 2.33 which is significant at 0.05 level of significance and t test value for whole hemisphere between

boys and girls are found 9.73 which is significant at 0.01 level of significance thus H1. is rejected. Thus it may be interpreted that girls give more emphasis to right hemispheric dimension and boys give more emphasis to whole and left hemispheric dimension.

Table 2: Showing t test value for hemispheric dimensions of learning & thinking style for High and Low Achievers.

S. No.	Hemispheric Dimension	Achievers	Sample Size	Mean	S. D.	d.f.	t. value	Level of significance
1	Right	High	33	18.71	8.22	64	1.63	Not Significance**
		Low	33	14.75	11.22			
2	Left	High	33	25.87	10.61	64	.451	Not Significance**
		Low	33	27.45	17.02			
3	Whole	High	28	7.14	4.27	56	1.59	Not Significance**
		Low	28	9.53	6.72			

*Value of .05 = 2.04, **Value of .01 = 2.75

The table 1 shows right, left, and whole hemispheric dimensions for learning & thinking style for High and Low Achievers. t test value for right hemisphere between High and Low Achievers are found 1.63 which is not significant at 0.01 level of significance, t test value for left hemisphere between for High and Low Achievers are found .451 which is not significant at both level of significance and t test value for whole hemisphere between boys and girls are found 1.59 which is not significant at 0.01 level of significance and H2. is accepted. Thus it may be interpreted that high achievers and low achievers have same preference for right, left and whole hemispheric dimension of learning and thinking style.

Table 3: Showing t test value for Academic Achievement for Boys and Girls.

S. No.	Academic Achievement	Sample Size	Mean	S. D.	D. F.	t. value	Level of significance
1	Boys	100	8.004	1.30	196	1.29	Not Significance**
	Girls	100	7.659	1.52			

*Value of .05 = 1.98, **Value of .01 = 2.62

The table 3 shows academic achievement for boys and girls. t test value for academic achievement between boys and girls are found 1.29 which is not significant at 0.01 level of significance and H3. is accepted. Thus it may be interpreted that secondary school boys and girls have same academic achievement.

EDUCATIONAL IMPLICATION:

The educational implications of the present piece of research are stated as follows:

1. Teacher can benefit from this study to know the learning & thinking styles of students and they can develop effective teaching strategies according to the need and tendency of these children.
2. Knowledge about the style of learning & thinking of school children will help to understand about individual differences among school children.
3. Result of present study will help the parents and teachers to perceive their children and their natural tendencies of how they think, act and learn in different situation as one child may welcome structure in learning while another may welcome new ways of doing things and rest may have fear for learning.
4. Present study reveals that school children depends upon right and left cerebral hemisphericity dominance so teacher should adopt those teaching strategies that improve functioning of right and left hemisphere as it is possible to modify a children's preferred style of learning & thinking.
5. Teachers being self-reflective and explicit about the role of learning and thinking style can make teaching more rewarding and enhance students

learning outcomes.

6. Different teaching techniques and methodologies can be adopted to activities and influence the brain hemisphere functions of the brain.

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